Technical Datasheet

pneumatech
medical gas solutions

Pressure Reducing Sets

Simplex and Duplex

Pneumatech MGS Pressure Reducing Sets provide reliable pressure reduction of medical gases between the supply source and the distribution system.

Sets are designed to regulate line pressure from 10 to 7 bar surgical air or 7 to 4 bar medical air based on three pipe sizes: 15mm, 22mm and 28mm, sized for different flow rate capacities. Sets are often installed where medical and surgical quality air is generated by a common supply source. Both Simplex and Duplex variants come complete with pressure safety valves and pressure gauges indicating the delivered pressure.

The standard range of Pneumatech MGS Pressure Reducing Sets are 'CE' marked under the Medical Devices Directive 93/42/EEC with approval from notified body no. 2460 (DNV GL Presafe AS). Under this directive, the specified products are classified as Class IIa Medical Devices.

Services for use

- Oxygen
- Compressed Air
- Medical or Surgical use

Formats

- Simplex, Munsen ring mounted or similar (Provided by the installer)
- Duplex, mounted onto a base plate by Pneumatech Medical Gas Solutions

Construction

- For duplex stations only, stainless steel powder coated base plate
- All components degreased for oxygen use
- Quarter turn ball valves die cast nickel plated brass alloy body with nitrile seals
- Non-relieving Regulators 28 bar rated
- Brass relief valve, 1/4" thread BSP
- Gauge monitoring 0 to 11 bar bottom entry connection

Relief Valve Settings

- Nominal 7 bar stations - 11 bar relieving
- Nominal 4 bar stations - 5.5 bar relieving

Specifications

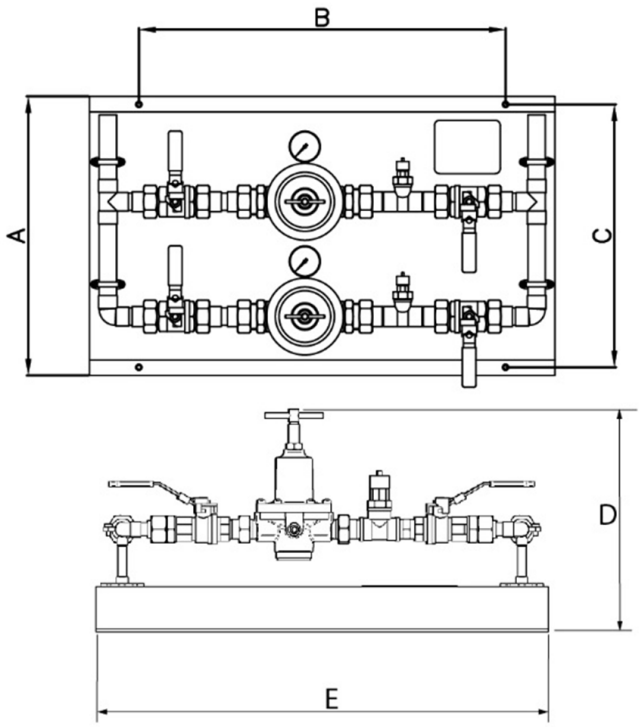
- Complies with BS EN ISO 7396-1 & HTM 02-01.

Part Numbers

Simplex Units			
Part No.	Inlet/Outlet Pressure	Flow	Connection Sizes Ø
3269636	7 - 4 bar	1400 L/min	15mm
3269635	10 - 7 bar	2950 L/min	15mm
3269638	7 - 4 bar	2400 L/min	22mm
3269637	10 - 7 bar	4000 L/min	22mm
3269640	7 - 4 bar	3000 L/min	28mm
3269639	10 - 7 bar	5000 L/min	28mm

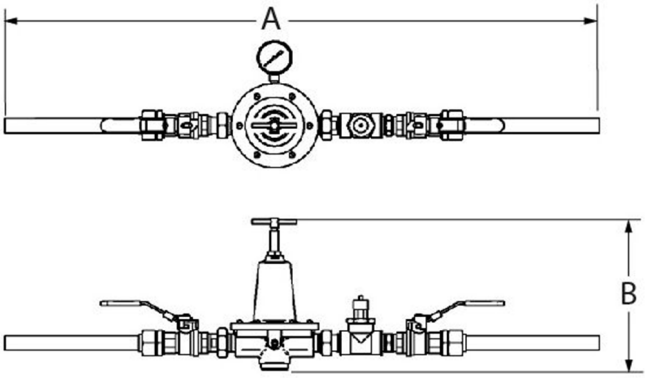
Duplex Units			
Part No.	Inlet/Outlet Pressure	Flow	Connection Sizes Ø
3269643	7 - 4 bar	1400 L/min	15mm
3269642	10 - 7 bar	2950 L/min	15mm
3269645	7 - 4 bar	2400 L/min	22mm
3269644	10 - 7 bar	4000 L/min	22mm
3269647	7 - 4 bar	3000 L/min	28mm
3269646	10 - 7 bar	5000 L/min	28mm

Duplex



	A	B	C	D	E
15 mm	450	630	425	250	750
22 mm	450	630	425	300	750
28 mm	450	630	425	310	750

Simplex



	A	B
15 mm	770	170
22 mm	850	225
28 mm	915	225

High Lift Safety Relief Valve

High Lift Safety Valves with atmospheric discharge suitable for Air.

The flow is de-rated and measured in accordance with BS EN ISO 4126-1.

Full Category IV PED approval CE marked.

The valves re-seat by minus 10% of set pressure.

Features and Benefits

- Soft valve seat for ‘bubble tight’ seal
- High lift for high performance to BS EN ISO 4126-1
- Atmospheric discharge
- Pressure range 0.5 bar G. to 27.5 bar G.
- Valve seat material to suit air and inert gases
- Temperature range -15°C to +180°C
- Brass construction with Stainless Steel springs
- 1/4” BSP thread

Testing

All Pneumatech Medical Gas Solutions Relief Valves are given a hydraulic seat tightness test before leaving the factory and the adjustment range is clearly marked.

Where actual setting is required, this ‘set pressure’ is shown.

Special tests or witness testing can be arranged at extra cost.

General Purpose Regulator

Regulators

Used to provide a convenient and low-cost method to reduce a supplied air pressure to a desired outlet pressure and transform a fluctuating air supply to a relatively constant reduced air pressure within the operating range of the regulator. This type of regulator is generally used in a wide variety of applications where reduced pressure is highly desirable for energy conservation, safety requirements, air circuit control and air instrumentation.

Operation

Turning the adjusting knob clockwise forces the main spring downward onto the flexible diaphragm which presses down onto the valve stem. The diaphragm and valve stem move downward forcing the balanced valve off its seat, which allows air to flow past the valve to the outlet side of the regulator and downstream to the air system. A precisely positioned aspirator tube communicates secondary pressure to the diaphragm resulting in instant compensation in order to maintain the desired secondary set pressure. The diaphragm, valve stem and valve move upward, compressing the regulating main spring. Upward movement stops when the spring force acting on the diaphragm balances the pressure force acting below the diaphragm. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.